



Micro Commercial Components



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# ESDLC0524DFN10

## 5 Volts ESD Protection Device

### Features

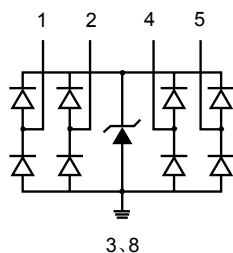
- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Small package saves board space
- Protects four(4) I/O lines
- Low clamping voltage
- 150W peak pulse power (tp=8/20us)

### Maximum Ratings

- Operating Junction & Storage Temperature: -55°C to +150°C

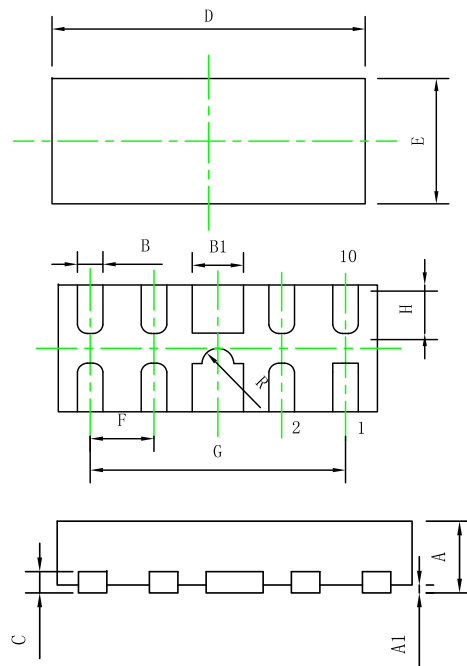
Parameter	Symbol	Limits	unit
IEC61000-4-2(ESD) Air Contact		±17 ±12	KV
IEC61000-4-5 (Surge): @ 8/20us		5	A
Peak Pulse Power: @ 8/20us	Ppp	150	W

### Pin Configuration



Pin	Identification
1,2,4,5	Input lines
6,7,9,10	Output Lines
3,8	Ground

### DFN-10

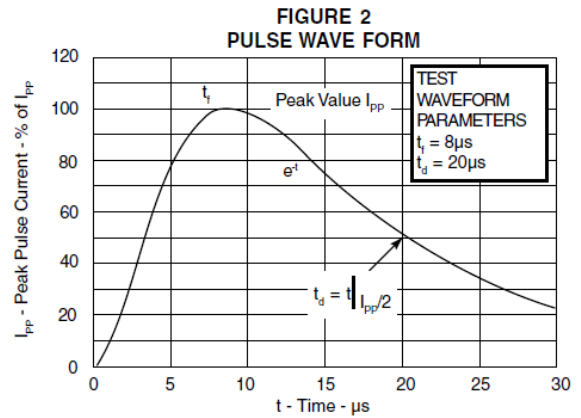
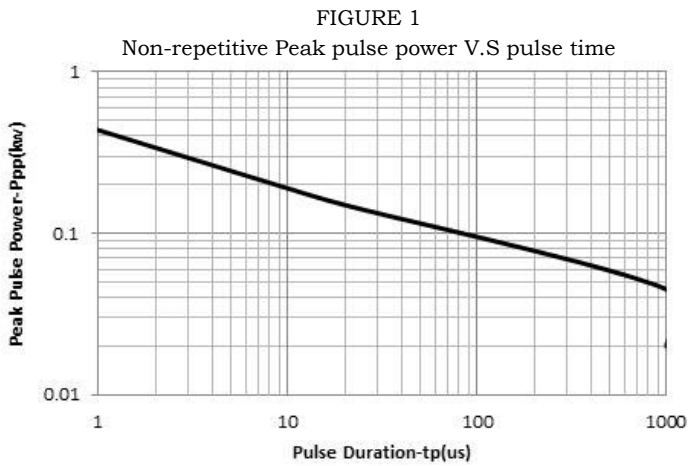


DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.016	.020	0.40	0.50	
A1	---	.002	---	0.05	
B	.006	.010	0.15	0.25	
B1	.014	.018	0.35	0.45	
C	.004	.008	0.10	0.20	
D	.095	.102	2.40	2.60	
E	.035	.043	0.90	1.10	
F	.020BSC		0.50BSC		
G	.079BSC		2.00BSC		
H	.012	.017	0.30	0.425	
R	.005	.005	0.12	0.13	

Electrical characteristics per line@25°C(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse stand-off voltage	$V_{RWM}$	Any I/O Pin to GND			5	V
Reverse Breakdown voltage	$V_{BR}$	$I_Z=1mA$ Any I/O Pin to GND	6.1		8.5	V
Reverse Leakage Current	$I_R$	$V_R=5V$ Any I/O Pins to GND			0.9	$\mu A$
Forward Voltage	$V_F$	$I_F=15mA$ GND to any I/O Pins			1.15	V
Junction Capacitance	$C_{I/O-GND}$ $C_{I/O-I/O}$	$V_R=0V$ $f = 1MHz$			0.8 0.4	pF
Clamping voltage	$V_C$	$I_{pp}=1A$ $t_p=8/20$ us			15	V
Clamping voltage	$V_C$	$I_{pp}=5A$ $t_p=8/20$ us			28	V

## Typical Characteristics



## Typical Characteristics

FIGURE 3  
Power Derating Curve

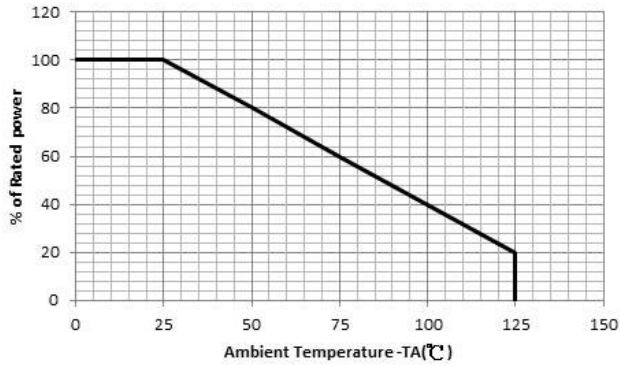


FIGURE 4  
Normalized Capacitance vs.Reverse Voltage

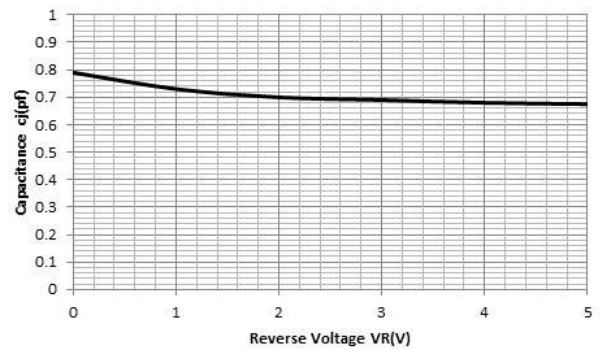


FIGURE 5  
Forward Voltage VF Map GND to I/O pins

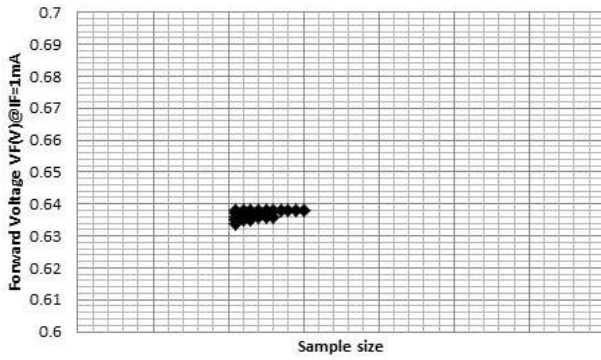
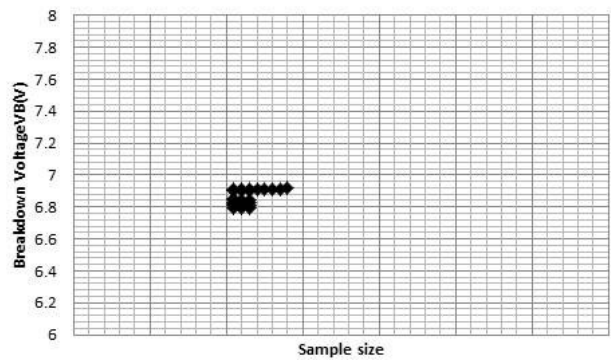


FIGURE 6  
Breakdown Voltage VB Map Any I/OPin to GND.





**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.